Title (en)

LITHIUM IRON PHOSPHATE HAVING AN OLIVINE STRUCTURE, AND PREPARATION METHOD THEREOF

Title (de)

LITHIUMEISENPHOSPHAT MIT OLIVINSTRUKTUR UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

PHOSPHATE DE FER LITHIÉ DE STRUCTURE OLIVINE ET SON PROCÉDÉ DE PRÉPARATION

Publication

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Application

EP 09822200 A 20091021

Priority

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Abstract (en)

Provided is an olivine-type lithium iron phosphate composed of secondary particles having a mean particle diameter (D50) of 5 to 100 μm, formed by aggregation of primary particles having a mean particle diameter (D50) of 50 to 550 nm, wherein the primary and secondary particles have a composition represented by Formula I below and the secondary particles have a porosity of 15 to 40%: Li 1+a Fe 1-x M x (PO 4-b)X b (I) wherein M, X, a, x and b are as defined above. The olivine-type lithium iron phosphate is in the form of secondary particles, thus imparting a high bulk density to lithium secondary batteries and exhibiting superior process efficiency due to shortened mixing time, when used to fabricate the lithium secondary batteries. Furthermore, the olivine-type lithium iron phosphate has the high porosity, thus allowing at least a portion of the secondary particles to be deformed and converted into primary particles in the process of pressing to fabricate electrodes and preventing deterioration in ionic conductivity due to the large particle diameter.

IPC 8 full level

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CPC (source: EP KR US)

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Cited by

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